

RECEIVED

JUN 13 2001

TECH CENTER 1600/2900

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/721,414ADATE: 05/08/2001
TIME: 11:42:22Input Set : A:\corrected sequence listing US non-prov. Suga.txt
Output Set: N:\CRF3\05082001\I721414A.raw

*add these
numeric
identifiers*

1507

W-->

1507

W-->

3 <110> APPLICANT: Suga, Hiroaki

5 <120> TITLE OF INVENTION: Catalytic RNA Molecules with Aminoacylation Activity

7 <130> FILE REFERENCE: 11520.0222

10 <140> CURRENT APPLICATION NUMBER: US 09/721,414A

11 <141> CURRENT FILING DATE: 2000-11-22

13 <150> PRIOR APPLICATION NUMBER: US 60/167,331

14 US 60/214,382 → *1507* US 60/214,382

15 <151> PRIOR FILING DATE: 1999-11-24

16 2000-06-28 → *1517* 2000-06-28

18 <160> NUMBER OF SEQ ID NOS: 22

20 <210> SEQ ID NO: 1

21 <211> LENGTH: 110

22 <212> TYPE: DNA

23 <213> ORGANISM: artificial sequence

25 <220> FEATURE:

W--> 26 <221> NAME/KEY: n represents a,t,g or c *this goes on a <223> line (per 1.823 of sequence rules)*

27 <222> LOCATION: 21-90

28 <223> OTHER INFORMATION: synthetic oligonucleotide containing random pool of 70

29 nucleotides

31 <400> SEQUENCE: 1

W--> 33 ggatcgtcag tgcattgaga nnnnnnnnnn nnnnnnnnnn 40

W--> 34 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 80

W--> 35 nnnnnnnnnn ggtgggtatcc ccaaggggta 110

37 <210> SEQ ID NO: 2

38 <211> LENGTH: 76

39 <212> TYPE: DNA

40 <213> ORGANISM: artificial sequence

42 <220> FEATURE:

43 <223> OTHER INFORMATION: completely synthesized primer complementary to the otrNAGln

45 <400> SEQUENCE: 2

46 tggctgcggt acgaggattc gaacctcgga atgccggatt 40

47 tagaaatccg gtcccttacc ccttggggat accacc 76

50 <210> SEQ ID NO: 3

51 <211> LENGTH: 52

52 <212> TYPE: DNA

53 <213> ORGANISM: artificial sequence

55 <220> FEATURE:

56 <223> OTHER INFORMATION: 5' primer containing T7 promoter sequence

58 <400> SEQUENCE: 3

59 ggtaacacgc atatgtaata cgactcacta taggatcgtc 40

60 agtgcattga ga 52

62 <210> SEQ ID NO: 4

63 <211> LENGTH: 20

64 <212> TYPE: DNA

65 <213> ORGANISM: artificial sequence

67 <220> FEATURE:

68 <223> OTHER INFORMATION: 3'completely synthesized primer

Does Not Comply
Corrected Diskette Needed*(create a new
<223> line)*

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```

70 <400> SEQUENCE: 4
71 tggctgcggt acgaggattc                20
73 <210> SEQ ID NO: 5
74 <211> LENGTH: 146
75 <212> TYPE: RNA
76 <213> ORGANISM: artificial sequence
78 <220> FEATURE:
79 <223> OTHER INFORMATION: pre-12 catalytic RNA
81 <400> SEQUENCE: 5
82 ggaucgucag ugcauugaga uuuccgcagc ccuucucacu    40
83 aacggugggu cauggguauu ggcguuaggu gcgggaugcu    80
84 acgcuggugg uauccccaag gguacgggac cggacauucg    120
85 agauucgaau ccucguaccg cagcca                146
88 <210> SEQ ID NO: 6
89 <211> LENGTH: 151
90 <212> TYPE: RNA
91 <213> ORGANISM: artificial sequence
93 <220> FEATURE:
W--> 94 <221> NAME/KEY: n represents a, t, g or c
95 <222> LOCATION: 12
96 <223> OTHER INFORMATION: pre-38 catalytic RNA
98 <400> SEQUENCE: 6
OK 99 ggaucgucag uncauugaga uuuccgcagc ccuucucacu    40
100 aacggugggu ucauggguau uggcguuagg ugcgggaugc    80
101 uacuacgcug gugguauccc caaggguaacg ggaccggauca    120
102 auucgagauu cgaauccucg uaccgcagcc a                151
105 <210> SEQ ID NO: 7
106 <211> LENGTH: 150
107 <212> TYPE: RNA
108 <213> ORGANISM: artificial sequence
111 <220> FEATURE:
112 <223> OTHER INFORMATION: pre-29 catalytic RNA
114 <400> SEQUENCE: 7
115 ggaucgucag ugcauugaga uuuccgcagg ccuucucac    40
116 uaacgguggg ucauggguau uggcguuagg ugcgggaugc    80
117 uacuacgcug gugguauccc caaggguaacg ggaccggaca    120
118 uucgagauuc gaauccucgu accgcagcca                150
120 <210> SEQ ID NO: 8
121 <211> LENGTH: 150
122 <212> TYPE: RNA
123 <213> ORGANISM: artificial sequence
125 <220> FEATURE:
126 <223> OTHER INFORMATION: pre-36 catalytic RNA
128 <400> SEQUENCE: 8
129 ggaucgucag ugcauugaga uuuccgcagc ccuucucacu    40
130 aacggugggu cauggguauu ggcguuaggu gcgggaugcu    80
131 acuacgcugg ugguaucccc aaggguaacg gaccggauca    120
132 uucgagauuc gaauccucgu accgcagcca                150
134 <210> SEQ ID NO: 9

```

*is not permitted in an RNA sequence - use "u" instead
 more exploration to (223)*

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135 <211> LENGTH: 150
136 <212> TYPE: RNA
137 <213> ORGANISM: artificial sequence
139 <220> FEATURE:
140 <223> OTHER INFORMATION: pre-24 catalytic RNA
142 <400> SEQUENCE: 9
143 ggau^ucgucag ugcauugaga uuuccgcagg ccuucucac 40
144 uaacgguggg ucauggguau ug^ugcguuagg ugcgggaugc 80
145 uacuacgcug gugguauccc caaggg^uuacg ggaccggaca 120
146 uucgagauuc gaauccucgu accgcagcca 150

148 <210> SEQ ID NO: 10
149 <211> LENGTH: 149
150 <212> TYPE: RNA
151 <213> ORGANISM: artificial Sequence
153 <220> FEATURE:
154 <223> OTHER INFORMATION: pre-25 catalytic RNA
156 <400> SEQUENCE: 10
157 ggau^ucgucag ugcauugaga uuuccgcagc ccuucucacu 40
158 aacgguggg^uu cauggguauu gg^ucgguuagg gcgggaugcu 80
159 acuacgcug^ug ugguauc^uccc aaggg^uuacg^g gaccggacau 120
160 ucgagauucg aa^uuccucgua ccgcagcca 149

163 <210> SEQ ID NO: 11
164 <211> LENGTH: 149
165 <212> TYPE: RNA
166 <213> ORGANISM: artificial Sequence
168 <220> FEATURE:
169 <223> OTHER INFORMATION: pre-22 catalytic RNA
171 <400> SEQUENCE: 11
172 ggau^ucgucag ugcauugaga uuuccgcagc ccuucucacu 40
173 aacgguggg^uu cauggguauu gg^ucgguuagg gcgggaugcu 80
174 acuacgcug^ug ugguauc^uccc aaggg^uuacg^g gaucggacau 120
175 ucgagauucg aa^uuccucgua ccgcagcca 149

178 <210> SEQ ID NO: 12
179 <211> LENGTH: 149
180 <212> TYPE: RNA
181 <213> ORGANISM: artificial Sequence
183 <220> FEATURE:

W--> 184 <221> NAME/KEY: n represents a ^u_t, g or c
185 <222> LOCATION: 112
186 <223> OTHER INFORMATION: pre-5 catalytic RNA
188 <400> SEQUENCE: 12

189 ggau^ucgucag ugcauugaga uuuccgcagc ccuucucacu 40
190 aacgguggg^uu cauggguauu gg^ucgguuagg gcgggaugcu 80
191 acuacgcug^ug ugguauc^uccc aaggg^uuacg^g gnccggacau 120
192 ucgagauucg aa^uuccucgua ccgcagcca 149

195 <210> SEQ ID NO: 13
196 <211> LENGTH: 149
197 <212> TYPE: RNA
198 <213> ORGANISM: artificial Sequence

← move explanation to <223>

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Input Set : A:\corrected sequence listing US non-prov. Suga.txt

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200 <220> FEATURE:
201 <223> OTHER INFORMATION: pre-19 catalytic RNA
203 <400> SEQUENCE: 13
204 ggaucgucag ugcauugaga uuuccgcagc ccuucucacu      40
205 aacggguaggu cauggguaau ggcguaaggu gcgggaugcu      80
206 acuacgcugg ugguaucucc aaggguacgg gaccggacau     120
207 ucgagauucg aauccucgua ccgcagcca      149
210 <210> SEQ ID NO: 14
211 <211> LENGTH: 150
212 <212> TYPE: RNA
213 <213> ORGANISM: artificial Sequence
215 <220> FEATURE:
216 <223> OTHER INFORMATION: pre-8 catalytic RNA
218 <400> SEQUENCE: 14
219 ggaucgucag ugcauugaga uuuccgcagc ccuucucacu      40
220 aacggugggg ucauggguaau uggcguaagg ugcgggaugc      80
221 uacuacgcug gugguaucuu caaggguaacg ggaccggaca     120
222 uucuagauuc gaauccucgu accgcagcca      150
225 <210> SEQ ID NO: 15
226 <211> LENGTH: 148
227 <212> TYPE: RNA
228 <213> ORGANISM: artificial Sequence
230 <220> FEATURE:
231 <223> OTHER INFORMATION: pre-23 catalytic RNA
233 <400> SEQUENCE: 15
234 ggaucgucag ugcauugaga uuuccgcagc ccuucucacu      40
235 aacggugggg cauggguaau ggcguaaggu gcgggaugcu      80
236 acuacgcugg ugguaucucc aaggguacgg accggacauu     120
237 cgagauucga auccucguac cgcagcca      148
240 <210> SEQ ID NO: 16
241 <211> LENGTH: 75
242 <212> TYPE: RNA
243 <213> ORGANISM: Escherichia coli
245 <220> FEATURE:
246 <223> OTHER INFORMATION: otrNA
248 <400> SEQUENCE: 16
249 ggugguaucc ccaaggggua agggaccgga uucuaaaucc      40
250 ggcauuccga gguucgaauc cucguaccgc agcca      75
252 <210> SEQ ID NO: 17
253 <211> LENGTH: 160
254 <212> TYPE: RNA
255 <213> ORGANISM: artificial sequence
257 <220> FEATURE:
258 <223> OTHER INFORMATION: H2 Leu catalytic RNA
260 <400> SEQUENCE: 17
261 ggaucgucag ugcauugaga ugcccaaagc ccuucucacu      40
262 uccggugggg caugcguaau ugcguuaggu gaggaugcu      80
263 aguaugcggg ugguauccaa gggguaaggg accggauucu     120
264 aaauccggcau uccgagguuc gaauccucgu accgcagcca     160

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Input Set : A:\corrected sequence listing US non-prov. Suga.txt
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266 <210> SEQ ID NO: 18
267 <211> LENGTH: 156
268 <212> TYPE: RNA
269 <213> ORGANISM: artificial sequence
271 <220> FEATURE:
272 <223> OTHER INFORMATION: D1-Leu catalytic RNA
274 <400> SEQUENCE: 18
275 ggauugcag ugcaugaga uagugacac aggcgggggg 40
276 ugauagcgca uuugaggguu ugguuugggg gguuaugcgu 80
277 gaguucugg gugguaucca agggguaagg gaucuaaauc 120
278 cgacauuccg agguucgaau ccucguaccg cagcca 156
281 <210> SEQ ID NO: 19
282 <211> LENGTH: 35
283 <212> TYPE: RNA
284 <213> ORGANISM: artificial sequence
286 <220> FEATURE:
287 <223> OTHER INFORMATION: RNA forming a minihelix
289 <400> SEQUENCE: 19
290 ggugguacga gguucgaauc cucguaccgc agcca 35
292 <210> SEQ ID NO: 20
293 <211> LENGTH: 73
294 <212> TYPE: RNA
295 <213> ORGANISM: artificial sequence
297 <220> FEATURE:
298 <223> OTHER INFORMATION: V1 variant of tRNA
300 <400> SEQUENCE: 20
301 ggugguaucc ccaagggua gggaccggau ucuaaaucg 40
302 gcauucgaga uucgaauc cuuaccgcag cca 73
304 <210> SEQ ID NO: 21
305 <211> LENGTH: 75
306 <212> TYPE: RNA
307 <213> ORGANISM: artificial sequence
309 <220> FEATURE:
310 <223> OTHER INFORMATION: V2 variant of tRNA
312 <400> SEQUENCE: 21
313 ggugguaucc ccaagggua gggaccggau ucuaaauc 40
314 gcauucgaga uucgaauc cuuaccgcag cca 75
317 <210> SEQ ID NO: 22
318 <211> LENGTH: 73
319 <212> TYPE: RNA
320 <213> ORGANISM: artificial sequence
322 <220> FEATURE:
323 <223> OTHER INFORMATION: V3 variant of tRNA
325 <400> SEQUENCE: 22
327 ggugguaucc ccaagggua gggaccggau ucuaaaucg 40
328 gcauucgagg uucgaauc cuuaccgcag cca 73

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VERIFICATION SUMMARY

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Input Set : A:\corrected sequence listing US non-prov. Suga.txt

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L:14 M:259 W: Allowed number of lines exceeded, <150> PRIOR APPLICATION NUMBER:
L:16 M:259 W: Allowed number of lines exceeded, <151> PRIOR FILING DATE:
L:26 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:1
L:33 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:34 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:35 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:94 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:6
L:99 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6
L:184 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:12
L:191 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12



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5	NPL	20
6	NPL	8
7	NPL	6
8	NPL	3
9	NPL	15
10	NPL	7
11	NPL	6

Total number of pages: 96

Remarks:

Order of re-scan issued on